

Claims

1. Method for processing data in the form of a grid of discrete source values, wherein at least one target value (T) within a region (A) of source values is determined by means of interpolation in said region (A) of source values characterised in that a minimum value (I_{min}) and a maximum value (I_{max}) are determined within a local region of source values around the target value (T), in that a measure of the dynamics is determined within a local region (B) of source values around the target value (T) and in that the target value is calculated by weighted interpolation.

5 and a maximum value (I_{max}) are determined within a local region of source values around the target value (T), in that a measure of the dynamics is determined within a local region (B) of source values around the target value (T) and in that the target value is calculated by weighted interpolation is adjusted in the direction of either said minimum value or said maximum value on the basis of said determined measure of the dynamics.

10 2. Method according to claim 1 characterised in that said measure of dynamics is determined as a normalized weighted value of the absolute differences ($\|I_j - I_{avg}\|$) in source values within said local region (B).

15 3. Method according to claim 2 characterized in that one of said absolute differences ($\|I_j - I_{avg(i)}\|$) is calculated for each one of the source values in said local region (B), and in that each said difference ($\|I_j - I_{avg(i)}\|$) is calculated between a given one ($I_j, ij \in B$) of said source values and a weighted average ($I_{avg(i)}$) of source values in a further local region (C) corresponding to said given one source value.

20 4. Method according to any of the preceding claims characterized in that the direction in which said adjustment is performed depends on the relative difference between said target value calculated by weighted interpolation (P_j) and said minimum and maximum value (I_{min}, I_{max}).

25 5. Method according to any of the preceding claims characterized in that use is made of weighted interpolation on the basis of a non-linear density distribution which assigns a heavier weighting to source values located closer in the grid than to source values located further away, in particular a Gaussian distribution, at least an exponential density distribution.

6. Method according to any of the preceding claims characterized in that a source value which lies in the grid closest to the target value to be determined, is taken as source of a region extending over a finite number of mutually adjacent source values and that the local maximum and the local minimum are determined in this region.

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7. Method as claimed in claim 6, characterized in that the measure for the dynamics the source values is determined in a second region extending over a finite number of mutually adjacent source values, which second region is optionally of the same size as the first region in which the local maximum and minimum are determined.

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8. Method as claimed in claim 7, characterized in that the dynamics are derived from a normalized difference between a source value and an average of all source values in the second region.

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15 9. Method as claimed in claim 8, characterized in that for the average of all source values in the second region a weighted average is taken which assigns a heavier weighting to source values located closer in the grid than to source values located further away and which particularly utilizes a non-linear density distribution for the purpose of determining the weighting factors and more particularly from a Gaussian distribution, at least from an exponential density distribution.

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10. Method according to any of the preceding claims characterized in that the final target value is a weighted average of the target value determined on the basis of interpolation and the local maximum and minimum, wherein a weighting factor is employed which depends on average local dynamics of the source values located around the target value to be determined and the relative location of the target value determined on the basis of interpolation relative to the local maximum and minimum.